



**MHFMS-EXTEND TEST
FOR CHILDREN WITH SPINAL MUSCULAR ATROPHY**

TIMED TEST MODULE

PROTOCOL ADMINISTRATION AND SCORING MANUAL

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*MHFMS-EXTEND: TIMED TEST MODULE
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MHFMS-EXTEND TEST MODULES

TIMED TEST of FUNCTION

Equipment needed
1. 4' X 6' high density blue mat
2. Child and adolescent adjustable sized benches
3. Adjustable height <i>Table Mate</i>
5. 4 standard size stairs with rails
6. Stopwatch
7. Timer
8. Athletic Arm band - 2
9. Measuring tape
10. Blue masking/painter's tape
11. Clear hallway/ 30 foot walk pathway
12. Appropriate sized table and chair for subject
13. 9 Hole Peg Test
14. Dycem Pad

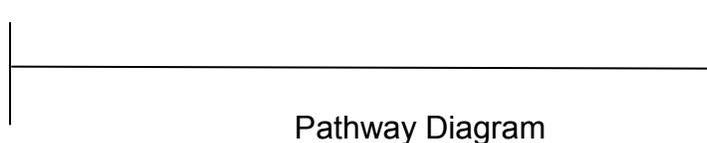
MHFMS-EXTEND TEST MODULES

TIMED TEST MODULE

Items # 1-4: Should optimally try to test without shoes or orthoses. If unable, subject may wear shoes and every day orthoses/braces as necessary to complete task. If tested with shoes and orthoses mark devices on CRF. No assistive devices allowed unless specified under test item. No physical assist or physical prompting that supports the trial should be given by the CE or family/guardian. Verbal encouragement may be provided. Verbal strategies to complete task should not be provided.

Item # 1: Time to walk/run 32.81 (10 meters) feet (as fast as is compatible with safety)

Time required for the subject to walk/run a fixed distance, as fast as possible without compromising subject safety, is measured, using a stopwatch. The fixed distance, e.g. 32.81 feet, is marked in the testing room or hallway with tape. A start line and a finish line, each 18 inches in length, should be placed horizontally at the beginning and end of the marked distance line. Use blue masking tape to mark lines diagramed below. The subject is instructed to walk/run as fast and as safely possible. Optimally test should be performed without any aids (no braces or assistive devices). If subject cannot perform without braces/assistive devices, use of the subject's normal ambulation aids (braces or equipment) should be allowed. Assistive equipment used should be recorded, as this may affect gait velocity. Mark on CRF if bracing or assistive equipment is used. Mark on CE Reminder Sheet if braces or assistive equipment was used and what they were. The clinical evaluator should walk behind the subject for safety. If the effects of acceleration and deceleration on gait velocity are to be ruled out, the subject should begin walking several feet before the start line, and may walk several feet past the finish line, before stopping. Time required to walk the fixed distance is recorded. Stopwatch is turned on at start line and clicked off when both feet cross finish line. Video from behind.



Item # 2: Time to climb up 4 standard stairs (beginning and ending with hands down by sides)

Time required for the subject to climb 4 stairs, as fast as possible without compromising subject safety, is measured, using a stopwatch. The subject is instructed to climb as fast as safely possible. Should attempt to complete item without shoes or orthoses, however, use of the subject's *normal* braces is allowed if they are unable to complete without. Assistive equipment should not be used. The clinical evaluator should walk behind the subject for safety. The subject should start at the bottom of the stairs with arms at sides. He will be instructed to climb as fast as possible and to stop with hands at sides on top step. Time required to climb is recorded. Stopwatch is turned on at the go signal and clicked off once subject reaches top step and has hands down by sides. If needs hands to balance may keep one hand on rail when they get to top. You must record if subject does or does not use rail or wall support by placing an X in the appropriate box on the CRF in the Comments column. Record time to complete on CRF. Mark on CRF if bracing is used. Mark on CE Reminder Sheet if braces were used and what they were. Video from side. If subject attempts item but does not climb in upright and instead creeps or scoots note in comment section and score 0 for the item.



Item # 3: Time to rise to standing from lying supine (beginning and ending with hands down by sides)

Time required for the subject to rise to standing from lying supine, as fast as possible without compromising subject safety, is measured, using stopwatch. Should attempt to complete item without shoes or orthoses, however, use of the subject's *normal* shoes or braces is allowed if they are unable to complete without. Assistive equipment should not be used. The clinical evaluator should guard the subject for safety. No hand-held assist or outside support allowed. The subject should be lying supine on the floor with arms down by sides and should be instructed to get up to stand as "fast" as they can. Do not instruct re: how they should use their hands. The object is that they get up as fast as they can- method/form does not matter. Time required to get up is recorded. Stopwatch is turned on at the go signal and clicked off once subject is standing with hands down by sides. You must record if subject does or does not use Gower's maneuver by placing an X in the appropriate box on the CRF in the Comments column. If subject uses Gower's maneuver you must record if partial (one hand push) or complete (2 hands to push up legs) by placing an X in the appropriate box on the CRF in the Comments column. Record time to complete on CRF. Mark on CRF if shoes and/or bracing is used. Mark on CE Reminder Sheet if shoes and/or braces were used and what they were.

Note: Subject may get up however they want, they just have to start in supine with legs flat and straight and end up standing with hands at sides.



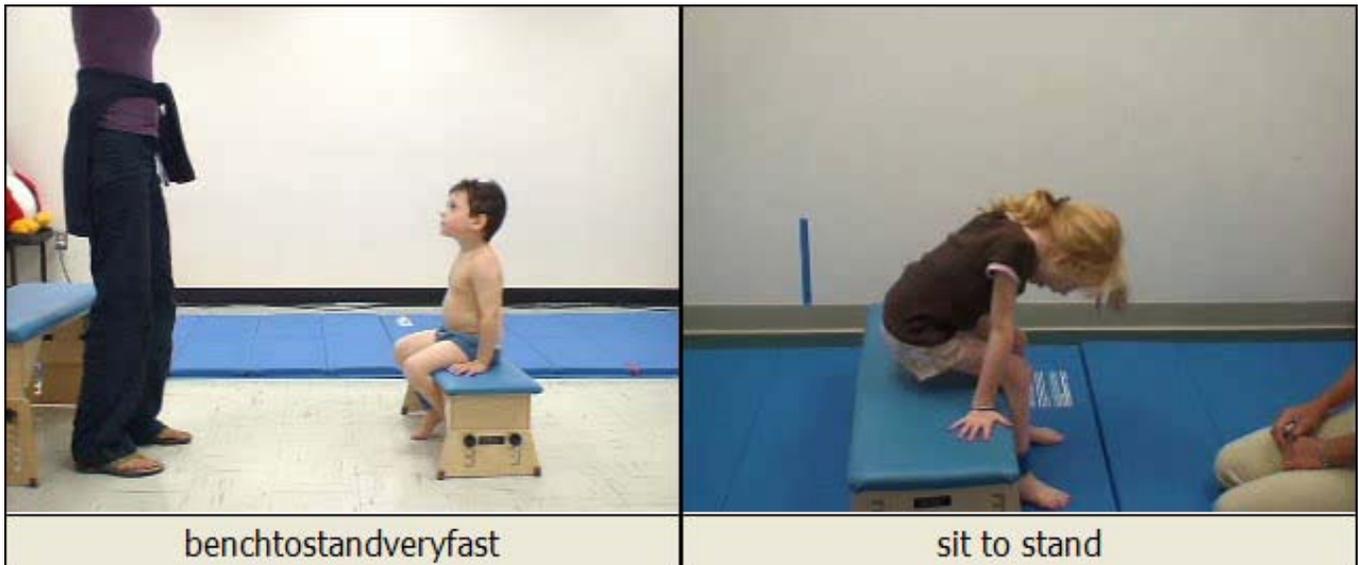
Item #4: Gets off chair/bench and stands as quickly as possible

Start position

Subject is sitting on chair/bench without arms. Chair/bench should be placed on carpet or tile floor, **NOT** on mat. Hips and knees as close to 90/90 as possible with feet in contact with floor. **NO braces and no shoes should be worn.** If chair/bench height is not exact, err on side of chair/bench being lower rather than higher. A lower chair/bench may make task more difficult. This is acceptable, as we do not want them in a higher chair/bench on a later visit as they would likely do better and this would be a false positive vs. a true change. Record bench/chair height on CE reminder form.

Directions

Instruct subject to get up from chair/bench without using arms as quickly as possible. Turn stop watch on at go signal and click off once child is standing upright and balancing independently.



Item # 5: Time to remove 9 pegs from Pegboard

The time it takes to remove 9 pegs from a pegboard will be measured. Subject is seated at appropriate height table with feet touching floor. Elbows and forearms may be supported on table surface. Position pegboard horizontally with round container next to hand being tested. Hand to be tested should be the dominant/preferred hand. Pegboard should be placed on Dycem or other non-skid surface 3 inches from table's edge. Table should be marked with tape to maintain consistent distance for subsequent tests. The subject is instructed to remove pegs, one at a time, using only 1 hand, from the pegboard, and place them in the reservoir until all 9 pegs are removed. If subject starts to use 2 hands, stop task and re-instruct. Start with hands on table, no peg in hand to start. The pegs can be removed from the holes in any order. The subject should work as quickly as possible. Assistive devices or equipment are not allowed. No physical prompting allowed by the evaluator during testing. The stopwatch is turned on as soon as the person touches the first peg, and the stopwatch is stopped as soon as the last peg is placed in the reservoir. Record time to complete on CRF. Record hand used on CE reminder form and on CRF.

